

gins, though less pronounced; teeth small and delicately cut, not confined to aperture, all extending evenly over a narrow zone of the base.

The largest and the smallest of five specimens, dredged from Honolulu harbor channel in 1915, measure in length 20 and 14 mm. respectively. The shells were all dead, but in a good state of preservation.

Type, one specimen in the author's collection.

REVIEW OF THE THYSANOPHORA PLAGIOPTYCHA GROUP.

BY H. A. PILSBRY.

In the course of identifying specimens of this group from Mexico and Panama it became necessary to examine all of the material in the collection of the Academy, some 46 lots of from one to several hundred specimens each. As some synonymy is involved, it may be well to put the results on record.

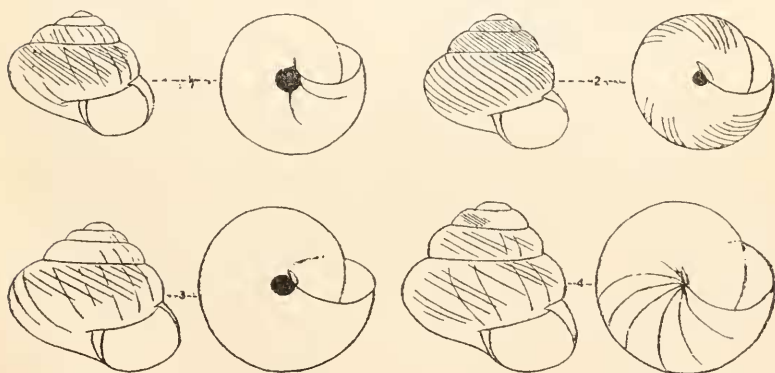


Fig. 1. *Thysanophora fuscula* (C. B. Ad.), Jamaica. Fig. 2, *T. plagioptycha* (Shuttl.), Humacao, Porto Rico. Fig. 3, *T. plagioptycha*, Fikahatchee Key, Florida. Fig. 4, *T. czecoides* (Tate), Panama City.

These forms were considered to belong to the genus *Acanthinula* by Strebel and some other authors. The sculpture, however, is only superficially like that genus, but exactly like such

typical *Thysanophoras* as *T. conspurcatella* and *hornii*. There are also species intermediate in shape, such as *T. fuscula* and *T. intonsa*, leading from the depressed to the conic forms. It would be easy to tell absolutely where these snails belong if specimens containing the animal were available.

Though not strictly germane to the subject of this paper, it may be mentioned that *Trichodiscina crinita* Fulton, Proc. Malac. Soc., London, XII, 240, from Colombia, is a species of *Thysanophora*. Some allied forms are known from Venezuela as well as from Mexico. It has about the shape of *T. conspurcatella* or *hornii*. The latter, when perfectly preserved, also has hairs.

THYSANOPHORA FUSCULA (C. B. Adams). Fig. 1.

Helix fuscula C. B. Ad., Contrib. to Conch. no. 2, 1849, p. 35.

Thysanophora fischeri Pilsbry, Proc. A. N. S. Phila. 1903, p. 763, pl. 49, fig. 6, 6a.

This Jamaican species has a wider umbilicus than others of the group, contained about 6.4 times in the diameter of shell. The figures are from a specimen from Adams, measuring: Alt. 2.15, diam. 2.55 mm., umbilicus 0.4 mm.

The sculpture of rather coarse growth wrinkles and minute, oblique, retractive cuticular threads, does not differ materially from that of *T. plagioptycha*.

I can see no material difference between the Jamaican shells and those taken near Victoria, Tamaulipas by S. N. Rhoads, and in the region of Tampico by A. A. Hinkley, and which I described as *T. fischeri*. In these the umbilicus is contained about 7 times in the diameter. When describing this form I did not think to compare with the Jamaican snail. Like some other minute species of the region, it will probably be found to be more widely spread than now known.

THYSANOPHORA PLAGIOPTYCHA (Shuttleworth). Fig. 2.

Helix plagioptycha Shuttl., Mittheil. der Naturforschenden Gesellschaft in Bern, 1854, p. 37 (Porto Rico and Vièque).

Helix ierensis Guppy, Proc. Scient. Asso. Trinidad, 1869, p. 242; Amer. Journ. of Conch. VI, 1871, p. 307, pl. 17, fig. 4. Pfeiffer, Mon. Hel. Viv. VII, p. 549.

A specimen from Humacao, Porto Rico, which may be taken as type locality, is figured. It scarcely shows growth striae, but the oblique cuticular threads are very well developed, extending upon the base. The umbilicus is contained between 10 and 11 times in the diameter. Alt. 2.25, diam. 2.5 mm., umbilicus 0.23 mm.; $4\frac{1}{2}$ whorls.

The specimens from Florida (fig. 3, Fikahatchee Key) are often larger, diam. 3 to 3.2 mm., with the umbilicus slightly larger, $7\frac{1}{2}$ to 8 times in the diameter. The sculpture is rarely so perfectly developed (or preserved) as in the Porto Rico shells. It is a common species on the keys and in some places on the mainland, as at Miami and Osprey.

A single small example from Brownsville, Texas, has the umbilicus remarkably small, contained about 14 times in the diameter. It is more depressed than *T. cæcoides*. It may represent a distinct race, but further material is needed.

Guppy has recorded the species (as *Helix ierensis*) from Trinidad. Specimens are at hand from St. Lucia (Tate), Cariaco, Venezuela (F. R. Cocking) and the U. S. of Colombia (R. Swift coll.). All of these are rather openly umbilicate, like the most widely umbilicate Florida shells, but not as open as *T. fuscula*.

The late Mr. E. A. Smith, in his excellent paper on Trinidad shells (Journ. of Conch. VIII, p. 239), considered *plagioptycha* and *ierensis* synonyms of *fuscula* Ad., but while the difference is not great, I have been unable to trace a real transition in the size of the umbilicus, and for the present it seems best to recognize the distinction. I have seen but three Jamaican specimens, however.

THYSANOPHORA CÆCOIDES (Tate). Fig. 4.

Helix cæcoides Tate, Amer. Journ. of Conch. V, p. 153, Feb., 1870.

Helix guatemalensis Crosse et Fischer, Journ. de Conchyl. XX, p. 222, 1872; XXI, p. 274, pl. 9, fig. 3, 1873; Miss. Sci. Mex., Moll., II, p. 664, pl. 71, figs. 9-9b (Guatemala, Sarg.).

Acanthinula granum Strebel, Beitr. Mex. IV, 1880, p. 31, pl. 4, f. 13 (Plantage Mirador).

Yucatan: Progreso (Heilprin Exped. 1890). Guatemala:

Quirigua (W. P. Coekerell, 1912). Nicaragua: Chontales forest, in moss on trees (Tate, type of *H. cæcoides*). Rep. de Panama: Boco del Toro (Tate, in A. N. S. P.); City of Panama (James Zetek).

This species differs very little from *T. plagioptycha* or *fuscata* in size, general shape and sculpture, but is readily distinguished by the very small, partly covered umbilical perforation. The umbilicus, while small, is much larger in the other species.

Part of the type lot of *T. cæcoides* is in the collection of the Academy, No. 12159, received from Prof. Tate. The original figures of *H. guatemalensis* are hardly recognizable, but those in the Mexican monograph are fairly good. I am not quite sure that the East Mexican *Acanthinula granum* Strebel (1880) belongs to this species, but the photographic figure shows only a very small umbilicus as in *cæcoides*. This may be taken up when topotypes are available.

The locality records are all for specimens in the collection of the Academy. Specimens from Costa Rica are still wanting.

LAND SHELLS OF MAINE.

BY E. G. VANATTA.

While botanizing in Maine in 1916 Mr. Bayard Long collected leaf mould containing land shells at numerous localities. A list of these stations with brief statement of the conditions and the dates is given below, the locality being condensed to a single word in the following list of species.

While most of the species have been known from Maine, it is hoped that the list will have interest to those who may study the details of distribution in the State.

York Co.—In moist woods bordering the salt marsh at Kittery, viii, 11; in moist woods at York, viii, 9; at the edge of a spring rill on the border of the salt marsh at Wells, viii, 8; in moist thickets along a small stream at Limington, viii, 29.

Cumberland Co.—In a moist wooded gully near Steep Falls in Baldwin, viii, 28; around Sand Pond, Baldwin, viii, 30; Douglas Hill in Sebago, viii, 30.